



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/634,830	08/06/2003	Koichi Sakita	121.1053	8613
21171	7590	05/18/2005	EXAMINER A, MINH D	
STAAS & HALSEY LLP SUITE 700 1201 NEW YORK AVENUE, N.W. WASHINGTON, DC 20005			ART UNIT 2821	PAPER NUMBER

DATE MAILED: 05/18/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/634,830

Applicant(s)

SAKITA, KOICHI

Examiner

Minh D A

Art Unit

2821

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 24 February 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-4 and 16 is/are allowed.
- 6) ☒ Claim(s) 5-15 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

2. Claims 5-15 are rejected under 35 U.S.C. 102(a) as being unpatentable by Kim et al (US 6,724,357)

Regarding claim 5, Kim discloses a method and apparatus for driving plasma display panel using selective writing and selective erasure including a plurality of Y electrodes arranged on a base plate, a plurality of X electrodes arranged between the plurality of Y electrodes, and a plurality of a electrodes crossing the X and Y electrodes, the method providing a recurring cycle of an initializing period, an addressing period, and a sustaining period, the method comprising: applying a ramp waveform in the initializing period, applying a sustaining pulse applied in the sustaining period to each of the X electrodes and the Y electrodes includes an alternating pulse oscillating between both sides of a predetermined reference voltage at least in the beginning portion of the sustaining period and a pulse of positive voltage based on the reference potential at the end of the sustaining period. See figures 1-10,col.1, lines 24-67 to col.9, lines 1-33.

Regarding claim 6, Kim discloses a plurality of Y electrodes arranged on a base plate, a plurality of X electrodes arranged between the plurality of Y electrodes, and a plurality of address electrodes crossing the X and Y electrodes (See figure 13), the method providing an initializing period, an addressing period and a sustaining period

Art Unit: 2821

being cyclically recurred, the method comprising: applying a ramp waveform in the initializing period, wherein a waveform applied to the address electrodes in the sustaining period includes a constant voltage waveform of negative voltage based on a predetermined reference potential, which is applied at least at the end of the sustaining period. See figures 1-10, col.1, lines 24-67 to col.9, lines 1-33.

Regarding claim 7, Kim discloses wherein the waveform applied to the address electrodes is a constant voltage waveform of negative voltage based on the predetermined reference potential, which is applied during the entire sustaining period. See figures 5-10, col.5, lines 1-67 to col.7, lines 1-45.

Regarding claim 8, Kim discloses wherein the waveform applied to the address electrodes includes a constant voltage waveform set at the level of the predetermined reference potential at least in the beginning portion of the sustaining period and a constant voltage waveform of negative voltage based on the reference potential, which is applied at the end of the sustaining period. See figures 5-10.

Regarding claim 9, Kim discloses the reference potential is regarded as at a ground level, and a sustaining pulse applied to each of the X electrodes and the Y electrodes in the sustaining period is an alternating pulse oscillating between both sides of the ground level. See figures 5-10.

Regarding claim 10, Kim discloses wherein the reference potential is regarded as at a ground level, and a sustaining pulse applied to each of the X electrodes and the Y electrodes in the sustaining period is an alternating pulse of positive voltage based on the ground level. See figures 5-10, col.5, lines 1-67 to col.9, lines 1-25.

Regarding claim 11, Kim discloses a plurality of Y electrodes arranged on a base plate, a plurality of X electrodes arranged between the Y electrodes, and a plurality of address electrodes crossing the X and Y electrodes (figure 13), the method providing an initializing period, an addressing period and a sustaining period being cyclically recurred, the method comprising: applying a ramp waveform in the initializing period, wherein a waveform applied to the address electrodes in the sustaining period includes a constant voltage waveform of positive voltage based on a predetermined reference potential at least in the beginning portion of the sustaining period and a constant voltage waveform at the level of the reference potential at the end of the sustaining period. See figures 1-10,col.1, lines 24-67 to col.9, lines 1-33.

Regarding claim 12, Kim discloses a method of driving a plasma display panel including a plurality of Y electrodes arranged on a base plate, a plurality of X electrodes arranged between the Y electrodes, and a plurality of address electrodes crossing the X and Y electrodes, the method providing an initializing period, an addressing period and a sustaining period being cyclically recurred, the method comprising: applying a ramp waveform in the initializing period, wherein a waveform applied to the address electrodes in the initializing period includes a constant voltage waveform of positive voltage based on a predetermined reference potential at the end of the initializing period. . See figures 1-10,col.1, lines 24-67 to col.9, lines 1-33.

Regarding claim 13, Kim discloses that, the ramp waveform applied to at least one type of the X electrodes and the Y electrodes includes a first ramp wave having a

Art Unit: 2821

positive ramp and a second ramp wave having a negative ramp. See col.2, lines 34-67 to col.3, lines 1-36.

Regarding claim 14, Kim discloses that, the initializing period, a waveform including the first ramp wave and the second ramp wave is applied to the Y electrodes, and a constant voltage of opposite polarity X corresponding to the first ramp wave and the second ramp wave is applied to the X electrodes. See figures 1-10.

Regarding claim 15, Kim discloses a plurality of Y electrodes arranged on a base plate, a plurality of X electrodes arranged between the Y electrodes, and a plurality of address electrodes crossing the X and Y electrodes (13), the method providing an initializing period, an addressing period and a sustaining period being cyclically recurred, the method comprising: applying a ramp waveform in the initializing period, wherein at least one of a voltage between the address electrodes and the Y electrodes at the end of the initializing period, a voltage between the X electrodes and the Y electrodes at the end of the initializing period, and an offset voltage of a voltage applied between the address electrodes and the Y electrodes at the end of the sustaining period is set at a predetermined level, and two types of discharges including a discharge between the X electrodes and the Y electrodes and a discharge between the address electrodes and the Y electrodes are caused at the end of the initializing period. . See figures 1-10,col.1, lines 24-67 to col.10, lines 1-7.

### ***Conclusion***

### ***Allowable Subject Matter***

3. Claims 1-4, and 16 are allowed.

Art Unit: 2821

The following is a statement of reasons for the indication of allowable subject matter:

The prior art does not teach that, the voltage of a driving waveform for each electrode satisfies the following relational expression:  $2V_{TAY} - V_{TX} \leq 2V_{AY} - V_{XY} - 2V_{AOFF}$ ; wherein  $V_{TAY}$  denotes a discharge starting threshold voltage between the address electrodes and Y electrodes, and  $V_{TX}$  denotes a discharge starting threshold voltage between the X electrodes and Y electrodes, respectively, when the Y electrodes serve as cathodes, wherein  $V_{AY}$  denotes a voltage applied between the address electrodes and the Y electrodes, and  $V_{XY}$  denotes a voltage applied between the X electrodes and the Y electrodes, respectively, at the trailing edge of the ramp waveform at the end of the initializing period, and wherein  $V_{AOFF}$  denotes an offset voltage of the voltage applied between the address electrodes and Y electrodes at the end of sustaining period recited in independent claims 1 and 16.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Hibino et al (US 6,738,033) and Okada.(US 6,476,561) are cited to show a display device.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Minh A whose telephone number is (571) 272-1817. The examiner can normally be reached on M-F (5:30 –2:30 PM).

If attempts to reach the examiner by telephone is unsuccessful, the examiner's supervisor, Don Wong, can be reached on (571) 272-1834. The fax phone numbers for

Art Unit: 2821

the organization where this application or proceeding is assigned are 703-872-9306 for regular communications and (703) 872-9319 for final communications.

Any inquiry of a general nature or relating to the status of this application should be directed to the Technology Center receptionist whose telephone number is (571) 272-1553.

Examiner

Minh A

Art unit 2821

5/16/05

A handwritten signature in black ink, appearing to read 'Wilson Lee', with a stylized, cursive script.

**WILSON LEE**  
**PRIMARY EXAMINER**